Further notes on the Saturniidae of Ecuador (Lepidoptera, Saturniidae)

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Abstract: Some distributional notes on the Saturniids of Ecuador are reported, including the first records of *Automeris larra* (WALKER, 1855), *Automeris heppneri* LEMAIRE, 1982, and *Automerina vala* (KIRBY, 1871) and for Ecuador.

Weitere Anmerkungen zur Saturniidenfauna Ecuadors (Lepidoptera, Saturniidae)

Zusammenfassung: Es werden einige Verbreitungsangaben für ecuadorianische Saturniiden besonders aus der Gegend von Napo gegeben, darunter auch die Erstnachweise für Ecuador von *Automeris larra* (WALKER, 1855), *Automeris heppneri* LEMAIRE, 1982 und *Automerina vala* (KIRBY, 1871).

Introduction

During a collecting trip in Ecuador made in July/August 1996, various species of Saturniidae were collected especially in the Napo region. In this paper we report additional data to the catalogue of LEMAIRE & VENEDICTOFF (1989) and to the subsequent notes of RACHELI (1994, 1995a, 1995b, 1995c, in press). *Automeris larra* (WALKER, 1855), *Automeris heppneri* LEMAIRE, 1982, and *Automerina vala* (KIRBY, 1871) are reported for the first time for Ecuador and additional data are also reported for 29 species including the rare *Leucanella apollinairei* (DOGNIN, 1923) and *Leucanella maasseni* (MÖSCHLER, 1872). An additional record is included following the study of the material collected in Ecuador during 1994.

Some species of the genera *Hylesia* HÜBNER, [1820], *Cerodirphia* MICHENER, 1949 and *Pseudodirphia* BOUVIER, 1928, collected during this travel in Ecuador are yet undetermined and are under investigation.

The distribution areas of each species are arranged according to LEMAIRE (1971, 1973 a, 1973 b, 1974, 1976, 1978, 1980, 1988) and LEMAIRE & VENEDICTOFF (1989).

[1] The 6 th contribution to the knowledge of Saturniidae of Ecuador.

All the specimens reported below are in the collection of the senior author.

Systematic part

Arsenurinae

Arsenura mossi JORDAN, 1922

1 ♂, Napo, Cordillera de Galera, Loreto Rd. km 40, 1200 m, 7.-11. VIII. 1996, D. & O. VELASTEGUI leg.

Distribution: It is a typical Guiano-Amazonian species distributed also on the eastern slope of the Andes.

In Ecuador, it is an occasional species known for three localities (see LEMAIRE & VENEDICTOFF 1989, RACHELI 1995 b). This new locality constitutes the highest record for this species.

Titaea tamerlan amazonensis LEMAIRE, 1980

1 ♀, Napo, Cordillera de Galera, Loreto Rd. km 40, 1200 m, 7.-11. VIII. 1996, D. & O. VELASTEGUI leg.

Distribution: Venezuela, Guyana, Surinam, French Guyana, Brazil, Colombia, Ecuador and Peru.

Widespread on the eastern side of the Andes and in the Amazon basin but never an abundant species, it may be seasonal.

Rhescyntis hippodamia hippodamia (CRAMER, 1777)

1 ♀, Napo, Cordillera de Galera, Loreto Rd. km 40, 1200 m, 7.-11. VIII. 1996, D. & O. Velastegui leg.

Distribution: Venezuela to Bolivia, Brazil, French Guyana.

Paradaemonia samba (SCHAUS, 1906)

1 ♂, Napo, neighbourhood of Tena, 700 m, VI. 1996, O. VELASTEQUI leg.

Distribution: Venezuela, Guyana, French Guyana, Brazil, Colombia, Ecuador and Peru.

It is a uncommon species reported by LEMAIRE & VENEDICTOFF (1989) only for three localities.

Ceratocampinae

Eacles penelope (CRAMER, 1775)

2 ♂♂, Napo, Cordillera de Galera, Loreto Rd. km 40, 1200 m, 7.-11. VIII. 1996, D. & O. Velastegui leg.

Distribution: Costa Rica to Bolivia, SE Brazil.

Eacles ormondei peruviana BOUVIER, 1927

1 ♂, Napo, Cordillera de Galera, Loreto Rd. km 40, 1200 m, 7.-11. VIII. 1996, D. & O. Velastegui leg.

Distribution: Venezuela, French Guyana, Brazil, Ecuador, Peru and Bolivia up to 1200 m on the eastern slope of the Andes.

Citheronia andina LEMAIRE, 1971

1 ♂, Napo, Cordillera de Galera, Loreto Rd. km 40, 1200 m, 7.-11. VIII. 1996, D. & O. Velastegui leg.

Distribution: Ecuador, Peru and Bolivia.

Procitheronia fenestrata (ROTHSCHILD, 1907)

1 ♂, Napo, Cordillera de Galera, Loreto Rd. km 40, 1200 m, 7.-11. VIII. 1996, D. & O. VELASTEGUI leg.

Distribution: French Guyana, Brazil, Ecuador, Peru and Bolivia.

Apparently, it is a very occasional species and it was known only for Lumbaquì and Limon km 16-17 (LEMAIRE & VENEDICTOFF 1989).

Adeloneivaia boisduvalii (DOÛMET, 1859)

1 ♀, Napo, Cordillera de Galera, Loreto Rd. km 40, 1200 m, 7.-11. VIII. 1996, D. & O. Velastegui leg.

Distribution: Costa Rica to Bolivia, SE Brazil.

Adeloneivaia jason jason (BOISDUVAL, 1872)

1 ♂, Napo, Cordillera de Galera, Loreto Rd. km 40, 1200 m, 7.-11. VIII. 1996, D. & O. Velastegui leg.

Distribution: Mexico to Bolivia, SE Brazil.

Hemileucinae

Periga parvibulbacea (LEMAIRE, 1972)

1 ♂, Napo, Cordillera de Galera, Loreto Rd. km 40, 1200 m, 7.-11. VIII. 1996, D. & O. Velastegui leg.

Distribution: A typical eastern Andean species distributed in Ecuador and Peru.

Automeris larra (WALKER, 1855)

1 ♂, Napo, Las Minas, 500 m, 23. VII. 1996, G. & T. RACHELI leg.

Distribution: Venezuela, French Guyana, Brazil, Colombia, Ecuador, Peru and Bolivia.

It is reported here from Ecuador for the first time.

Automeris boops (FELDER & ROGENHOFER, 1874)

2 ♂♂, Napo, Cordillera de Galera, Loreto Rd. km 40, 1200 m, 7.-11. VIII. 1996, D. & O. Velastegui leg.

Distribution: Venezuela, Colombia, Ecuador and Peru.

Automeris duchartrei BOUVIER, 1936

1 ♂, Napo, Las Minas, 500 m, 23. VII. 1996, G. & T. RACHELI leg.

Distribution: Costa Rica to Bolivia.

Automeris amanda subobscura WEYMER, 1909

4 ♂♂, Napo, Cordillera de Galera, Loreto Rd. km 40, 1200 m, 7.-11. VIII. 1996, D. & O. Velastegui leg.

Distribution: Colombia and Ecuador.

Automeris orestes (BOISDUVAL, 1875)

1 ♂, Napo, Rio Arajuno, San Pedro, 380 m, 23. VII. 1996, G. & T. RACHELI leg.

Distribution: French Guyana, Surinam, Venezuela, Brazil, Ecuador and Peru.

An Amazonian species, never abundant, known in Ecuador only from a few localities (LEMAIRE & VENEDICTOFF 1989; RACHELI 1995 a).

Automeris heppneri LEMAIRE, 1982

1 ♀, Napo, Misahualli, 450 m, 7.-11. VIII. 1996, G. & T. RACHELI leg.

Distribution: Peru and Ecuador.

This is a new record for Ecuador. This species was described by LEMAIRE (1982) based on 23 ♂♂ and 1 ♀ from Peru, Madre de Dios, Tambopata Research station, 30 km SO Puerto Maldonado, 290 m.

Leucanella contei (LEMAIRE, 1967)

2 ♂♂, Napo, Cordillera de Galera, Loreto Rd. km 40, 1200 m, 7.-11. VIII. 1996, D. & O. VELASTEGUI leg.

Distribution: Peru and Ecuador.

Leucanella apollinairei (DOGNIN, 1923)

1 ♂, Napo, Misahualli, 450 m, 22. VII. 1996, G. & T. RACHELI leg.

Distribution: Colombia and Ecuador.

LEMAIRE (1973) considered this species as a synonym of *Leucanella flammans* (SCHAUS, 1900) which is a western Andean species known only from three Ecuadorian localities (see LEMAIRE & VENEDICTOFF 1989, D'ABRERA 1995). Subsequently, LEMAIRE & VENEDICTOFF (1989) have considered *flammans* and *apollinairei* as two distinct species and this latter was reported only for Sangay.

Leucanella maasseni (MÖSCHLER, 1872)

1 ♂, Napo, Misahualli, 450 m, 22. VII. 1996, G. & T. RACHELI leg.

Distribution: French Guyana, Surinam, Brazil, Ecuador and Peru.

This species was reported by LEMAIRE & VENEDICTOFF (1989) only from three localities.

Gamelia abasia (STOLL, 1781)

1 ♂, Pichincha, Tandapi, 1470 m, 28. VII. 1996, G. & T. RACHELI leg.

Distribution: Surinam, Guyana, French Guyana, Venezuela, Brazil, Colombia, Ecuador, Peru and Bolivia.

Gamelia pyrrhomelas (WALKER, 1856)

1 ♀, Pichincha, Tandapi, 1470 m, 28./31. VII. 1994, L. & T. RACHELI leg.

Distribution: Colombia and Ecuador.

Gamelia rindgei LEMAIRE, 1967

1 ♂, Napo, Las Minas, 500 m, 23. VII. 1996; 1 ♂, Napo, Rio Arajuno, San Pedro, 380 m, 23. VII. 1996, G. & T. RACHELI leg.

Distribution: Guyana, French Guyana, Venezuela, Ecuador and Peru.

Hyperchiria nausica (CRAMER, 1779)

6 ♂♂, Napo, Cordillera de Galera, Loreto Rd. km 40, 1200 m, 7.-11. VIII. 1996, D. & O. VELASTEGUI leg.

Distribution: Mexico to Brazil.

In eastern Ecuador it is a very common species in July/August.

Automerina vala (KIRBY, 1871)

1 ♂, Napo, Rio Arajuno, San Pedro, 380 m, 23. VII. 1996, G. & T. RACHELI leg.

Distribution: Peru and Ecuador.

A new record for Ecuador.

Automerina caudatula (FELDER & ROGENHOFER, 1874)

1 ♂, Napo, Cordillera de Galera, Loreto Rd. km 40, 1200 m, 7.-11. VIII. 1996, D & O. VELASTEGUI leg.

Distribution: French Guyana, Brazil, Ecuador and Peru.

Apparently, it is a rare species reported by LEMAIRE & VENEDICTOFF (1989) only from three localities.

Automerula auletes (HERRICH-SCHÄFFER, [1854])

1 ♂, 1 ♀, Napo, Cordillera de Galera, Loreto Rd. km 40, 1200 m, 7.-11. VIII. 1996 D. & O. VELASTEGUI leg.

Distribution: Panama, Colombia, Ecuador, Peru, Bolivia, Venezuela, Trinidad Surinam, Guyana, French Guyana and Brazil.

Paradirphia oblita oblita (LEMAIRE, 1976)

2 ♂♂, Napo, Cordillera de Galera, Loreto Rd. km 40, 1200 m, 7.-11. VIII. 1996, D & O. VELASTEGUI leg.

Distribution: Ecuador and Peru.

Dirphia avia (STOLL, 1780)

2 ♂♂, Napo, Cordillera de Galera, Loreto Rd. km 40, 1200 m, 7.-11. VIII. 1996, D & O. VELASTEGUI leg.

Distribution: Nicaragua to SE Brazil.

Dirphiopsis flora orientalis (LEMAIRE, 1976)

3 ♂♂, Napo, Cordillera de Galera, Loreto Rd. km 40, 1200 m, 7.-11. VIII. 1996, D. & O. VELASTEGUI leg.

Distribution: Ecuador, Peru and Bolivia.

Saturniinae

Copaxa decrescens WALKER, 1855

2 ♂♂, Cordillera de Galera, Loreto Rd. km 40, 1200 m, 7.-11. VIII. 1996, D. & O. VELASTEGUI leg.

Distribution: Venezuela to N Argentina and SE Brazil.

Comments

Most of the distributional data are from Napo, Loreto Rd. km 40, a locality situated at 1200 m of altitude and approximately 30 km from the locality Loreto Rd. km 11, 1500 m, reported by LEMAIRE & VENEDICTOFF (1989). The presence at Loreto Rd. km 40 of typical Amazonian species such as *Arsenura mossi, Eacles ormondei peruviana* or *Procitheronia fenestrata* mixed with typical Andean taxa as *Automeris boops,* suggests that this locality is the limit for the Amazonian/pre-Andean and mesothermic elements (sensu LEMAIRE & VENEDICTOFF 1989). The Andean *Eacles ormondei violacea* LEMAIRE, 1975 was reported by LEMAIRE & VENEDICTOFF (1989) from Loreto Rd. km 11 while at Loreto Rd. km 40 the specimen recorded is referable to the Amazonian *peruviana* although intermediate in pattern with *violacea.* It is possible that there is a clinal transition between the different populations.

At present, the number of saturniid species known from Ecuador counts for 272 (see LEMAIRE & VENEDICTOFF 1989, LEMAIRE & TERRAL 1994, RACHELI 1995 b).

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References

D'ABRERA, B. (1995): Saturniidae Mundi. Saturniid Moths of the World. Part I. – Keltern (Automeris Press), 177 pp.

LEMAIRE, C. (1971): Révision du genre *Automeris* HÜBNER et des genres voisins. Biogéographie, Éthologie, Morphologie, Taxonomie (Lep. Attacidae). – Mém. Mus. nat. Hist. nat. (N.S.), sér. A, Zool., **68**: 1-232, figs. 1-132, pls. 1-29.

—— (1973 a): Révision du genre *Automeris* HÜBNER et des genres voisins. Biogéographie, Éthologie, Morphologie, Taxonomie (Lep. Attacidae) (suite). – Mém. Mus. nat. Hist. nat. (N.S.), sér. A, Zool., **79**: 233-422, figs. 133-278, pls. 30-49.

—— (1973 b): Revision du genre *Lonomia* WALKER [Lep. Attacidae]. – Annals Soc. entomol. Fr. (N.S.) 8 (4) (1972): 767-861.

—— (1974): Révision du genre *Automeris* HÜBNER et des genres voisins. Biogéographie, Éthologie, Morphologie, Taxonomie (Lep. Attacidae) (suite et fin). – Mém. Mus. nat. Hist. nat. (N.S.), sér. A, Zool., **92**: 423-576, figs. 279-370, pls. 50-61.

—— (1976): Description d'Attacidae inédits de l'Amerique Latine [Lep.]. – Lambillionea **76**: 25-36.

—— (1978): Les Attacidae americains. The Attacidae of America (= Saturniidae). Attacinae. – Neuilly-sur-Seine (Éd. C. Lemaire), 238 pp, 49 pls.

—— (1980): Les Attacidae americains. The Attacidae of America (= Saturniidae). Arsenurinae. – Neuilly-sur-Seine (Éd. C. Lemaire), 199 pp, 76 pls.

—— (1982): Vingt-huit Saturniidae néotropicaux inédites [Lepidoptera]. – Annls. Soc. entomol. Fr. (N.S.) **18** (1): 55-88.

—— (1988): Les Saturniidae americains. The Saturniidae of America. Los Saturniidae americanos (= Attacidae). Ceratocampinae. – San José (Museo Nacional de Costa Rica), 480 pp, 64 pls.

——, & TERRAL, G. (1994): II. Un *Periphoba* inédit de l'Equateur. – Nachr. entomol. Ver. Apollo, Frankfurt am Main, N.F. **15** (3): 403-408.

——, & VENEDICTOFF, N. (1989): Catalogue and biogeography of the Lepidoptera of Ecuador. I Saturniidae. With a description of a new species of *Meroleuca* PACKARD. – Bull. Allyn Mus. **129**: 1-60.

RACHELI, L. (1994): Some notes on Ecuadorian Saturniidae (Lepidoptera). – Atalanta, **25** (1/2): 275-279.

—— (1995 a): Some notes on Ecuadorian Saturniidae II (Lepidoptera, Hemileucinae). – Atalanta **26** (1/2): 291- 296.

—— (1995 b): Contributo alla conoscenza dei Saturnidi dell'Ecuador (Lepidoptera, Saturniidae). – Fragm. entomol. **26** (2): 253-258.

—— (1995 c): Lista preliminare dei Saturnidi di Misahualli, Napo, Ecuador (Lepidoptera, Saturniidae). – Fragm. entomol. **27** (1): 117-144.

—— (in press): Additions and corrections to the lists of Ecuadorian Saturniidae (Lepidoptera, Saturniidae). – Boll. Soc. entomol. Ital., Genova.

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